IN THE CLAIMS:

Please cancel claims 1-53 without prejudice or disclaimer, and substitute new claims 54-132 therefor as follows:

Claims 1-53 (Cancelled).

54. (New) A method of controlling the inner pressure of a tyre mounted on a rim, said method comprising the steps of:

inflating an inner volume of the tyre to an operating pressure at a reference temperature;

admitting a fluid compressed to a first pressure higher than the operating pressure of the tyre at the reference temperature into a tank associated with the rim;

bringing the inner volume of said tyre into communication with said tank when the pressure of the inner volume of said tyre is lower than said operating pressure, by means of at least one mechanical valve opening which is controlled by an elastic element having an elastic constant varying within a temperature range of -50°C to +50°C in such manner that said valve is maintained in a closed position following a reduction in the inner tyre pressure due to a temperature reduction within said range; and

stopping the communication between said inner volume and tank when said tyre pressure is substantially equal to said operating pressure.

55. (New) The method as claimed in claim 54, wherein said temperature range is about -30°C to about +50°C.

56. (New) The method as claimed in claim 54, wherein said temperature range is about -30°C to about +20°C.

57. (New) The method as claimed in claim 54, wherein said elastic element controlling opening of said valve has a value of elastic constant measured at -50°C differing from the value of elastic constant measured at +50°C by at least 10% with respect to the value of elastic constant measured at +50°C.

58. (New) The method as claimed in claim 54, wherein said elastic element controlling opening of said valve has a value of elastic constant measured at -50°C differing from the value of elastic constant measured at +50°C by no more than 40% with respect to the value of elastic constant measured at +50°C.

59. (New) The method as claimed in claim 55, wherein said elastic element controlling opening of said valve has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +50°C by at least 10% with respect to the value of elastic constant measured at +50°C.

60. (New) The method as claimed in claim 55, wherein said elastic element controlling opening of said valve has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +50°C by no more than 40% with respect to the value of elastic constant measured at +50°C.

61. (New) The method as claimed in claim 56, wherein said elastic element controlling opening of said valve has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +20°C by at least 10% with respect to the value of elastic constant measured at +20°C.

62. (New) The method as claimed in claim 56, wherein said elastic element controlling opening of said valve has a value of elastic constant measured at -30°C

differing from the value of elastic constant measured at +20°C by no more than 40% with respect to the value of elastic constant measured at +20°C.

63. (New) The method as claimed in claim 57, wherein said elastic element controlling opening of said valve has a value of elastic constant measured at -50°C differing from the value of elastic constant measured at +50°C by at least 20% with respect to the value of elastic constant measured at +50°C.

64. (New) The method as claimed in claim 58, wherein said elastic element controlling opening of said valve has a value of elastic constant measured at -50°C differing from the value of elastic constant measured at +50°C by no more than 30% with respect to the value of elastic constant measured at +50°C.

65. (New) The method as claimed in claim 59, wherein said elastic element controlling opening of said valve has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +50°C by at least 20% with respect to the value of elastic constant measured at +50°C.

66. (New) The method as claimed in claim 60, wherein said elastic element controlling opening of said valve has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +50°C by no more than 30% with respect to the value of elastic constant measured at +50°C.

67. (New) The method as claimed in claim 61, wherein said elastic element controlling opening of said valve has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +20°C by at least 20% with respect to the value of elastic constant measured at +20°C.

68. (New) The method as claimed in claim 62, wherein said elastic element controlling opening of said valve has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +20°C by no more than 30% with respect to the value of elastic constant measured at +20°C.

69. (New) The method as claimed in claim 54, wherein the ratio between said operating pressure of the tyre and said first pressure in said tank is about 0.1 to about 0.6.

70. (New) The method as claimed in claim 69, wherein the ratio between said operating pressure of the tyre and said first pressure in said tank is about 0.2 to about 0.4.

71. (New) The method as claimed in claim 54, wherein said first pressure in said tank is about 8 to about 12 bars.

72. (New) The method as claimed in claim 71, wherein said first pressure in said tank is about 8.5 to about 10 bars.

73. (New) The method as claimed in claim 54, wherein said step of bringing the inner volume of said tyre into communication with said tank takes place when the pressure of the inner volume of said tyre is lower than said operating pressure by at least 5%.

74. (New) The method as claimed in claim 54, wherein said elastic constant decreases on increasing of the temperature in said temperature range.

75. (New) The method as claimed in claim 54, wherein said elastic constant increases on decreasing of the temperature in said temperature range.

76. (New) A wheel having a controlled and compensated pressure, comprising:

a rim associated with a tank adapted to be filled with a fluid to a first pressure;

a tyre mounted on said rim and having an inner volume inflated to an operating pressure, said operating pressure being lower than said first pressure; and

at least one valve adapted to regulate a communication between said tank and the inner volume of said tyre,

said valve comprising at least one elastic element operatively associated with at least one closure member designed to open and close at least one port in said valve to bring said tank into communication with said tyre when pressure in said tyre is lower than said operating pressure, said elastic element having an elastic constant varying within a temperature range from -50°C to +50°C in such a manner that the valve is maintained in a closed position following a reduction in the inner tyre pressure due to a temperature reduction within said range.

77. (New) The wheel as claimed in claim 76, wherein said temperature range is about -30°C to about +50°C.

78. (New) The wheel as claimed in claim 76, wherein said temperature range is about -30°C to about +20°C.

79. (New) The wheel as claimed in claim 76, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -50°C differing from the value of elastic constant measured at +50°C by at least 10% with respect to the value of elastic constant measured at +50°C.

80. (New) The wheel as claimed in claim 76, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -50°C differing from the value of elastic constant measured at +50°C by no more than 40% with respect to the value of elastic constant measured at +50°C.

81. (New) The wheel as claimed in claim 77, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +50°C by at least 10% with respect to the value of elastic constant measured at +50°C.

82. (New) The wheel as claimed in claim 77, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +50°C by no more than 40% with respect to the value of elastic constant measured at +50°C.

83. (New) A wheel as claimed in claim 78, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +20°C by at least 10% with respect to the value of elastic constant measured at +20°C.

84. (New) The wheel as claimed in claim 78, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +20°C no more than 40% with respect to the value of elastic constant measured at +20°C.

85. (New) The wheel as claimed in claim 79, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -50°C

differing from the value of elastic constant measured at +50°C by at least 20% with respect to the value of elastic constant measured at +50°C.

86. (New) The wheel as claimed in claim 80, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -50°C differing from the value of elastic constant measured at +50°C by no more than 30% with respect to the value of elastic constant measured at +50°C.

87. (New) The wheel as claimed in claim 81, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +50°C by at least 20% with respect to the value of elastic constant measured at +50°C.

88. (New) The wheel as claimed in claim 82, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +50°C by no more than 30% with respect to the value of elastic constant measured at +50°C.

89. (New) The wheel as claimed in claim 83, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +20°C by at least 20% with respect to the value of elastic constant measured at + 20°C.

90. (New) The wheel as claimed in claim 84, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +20°C by no more than 30% with respect to the value of elastic constant measured at +20°C.

91. (New) The wheel as claimed in claim 76, wherein said tank is integrated into said rim.

92. (New) The wheel as claimed in claim 76, wherein said tank involves a volume such that the ratio between said volume of said tank and said inner volume of the tyre is about 0.1 to about 0.4.

93. (New) The wheel as claimed in claim 92, wherein said ratio is about 0.12 to about 0.25.

94. (New) The wheel as claimed in claim 76, wherein said elastic element is a spring.

95. (New) The wheel as claimed in claim 76, wherein said elastic constant decreases on decreasing of the temperature in said temperature range.

96. (New) The wheel as claimed in claim 76, wherein said elastic constant increases on decreasing of the temperature in said temperature range.

97. (New) The wheel as claimed in claim 76, wherein said valve brings said tyre into communication with said tank when pressure in said tyre is lower by at least 5% than said operating pressure.

98. (New) The wheel as claimed in claim 76, wherein said wheel comprises an inflation valve operatively associated with said tank.

99. (New) The wheel as claimed in claim 76, wherein said wheel comprises a control and restoration valve associated with said tyre.

100. (New) The wheel as claimed in claim 94, wherein said elastic element comprises a second spring operatively associated with said spring.

101. (New) The wheel as claimed in claim 100, wherein said second spring has an elastic constant substantially constant within a temperature range of -50°C to +50°C.

102. (New) The wheel as claimed in claim 101, wherein said second spring supports a major portion of the load of said elastic element.

103. (New) The wheel as claimed in claim 102, wherein the load supported by the second spring is about 60% to about 95% of the load supported by said elastic element.

104. (New) The wheel as claimed in claim 102, wherein the load supported by the second spring is about 70% to about 80% of the load supported by said elastic element.

105. (New) The wheel as claimed in claim 100, wherein the second spring is concentrically coupled to said spring.

106. (New) The wheel as claimed in claim 105, wherein the second spring is external with respect to said spring.

107. (New) A valve suitable for a wheel having a controlled and compensated pressure, said valve being adapted to regulate a communication between a tank and an inner volume of a tyre provided in said wheel, said valve comprising at least one elastic element operatively associated with at least one closure member designed to open and close at least one port in said valve to bring said tank into communication with said tyre when pressure in said tyre is lower than an operating pressure, said elastic element having an elastic constant varying within a temperature range from -50°C to +50°C in

such a manner that the valve is maintained in a closed position following a reduction in the inner tyre pressure due to a temperature reduction within said range.

108. (New) The valve as claimed in claim 107, wherein said temperature range is about -30°C to about +50°C.

109. (New) The valve as claimed in claim 107, wherein said temperature range is about -30°C to about +20°C.

110. (New) The valve as claimed in claim 107, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -50°C differing from the value of elastic constant measured at +50°C by at least 10% with respect to the value of elastic constant measured at +50°C.

111. (New) The valve as claimed in claim 107, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -50°C differing from the value of elastic constant measured at +50°C by no more than 40% with respect to the value of elastic constant measured at +50°C.

112. (New) The valve as claimed in claim 108, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +50°C by at least 10% with respect to the value of elastic constant measured at +50°C.

113. (New) The valve as claimed in claim 108, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +50°C by no more than 40% with respect to the value of elastic constant measured at +50°C.

114. (New) The valve as claimed in claim 109, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +20°C by at least 10% with respect to the value of elastic constant measured at +20°C.

115. (New) The valve as claimed in claim 109, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +20°C by no more than 40% with respect to the value of elastic constant measured at +20°C.

116. (New) The valve as claimed in claim 110, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -50°C differing from the value of elastic constant measured at +50°C by at least 20% with respect to the value of elastic constant measured at +50°C.

117. (New) The valve as claimed in claim 111, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -50°C differing from the value of elastic constant measured at +50°C by no more than 30% with respect to the value of elastic constant measured at +50°C.

118. (New) The valve as claimed in claim 112, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +50°C by at least 20% with respect to the value of elastic constant measured at + 50°C.

119. (New) The valve as claimed in claim 113, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C

differing from the value of elastic constant measured at +50°C by no more than 30% with respect to the value of elastic constant measured at +50°C.

120. (New) The valve as claimed in claim 114, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +20°C by at least 20% with respect to the value of elastic constant measured at + 20°C.

121. (New) The valve as claimed in claim 115, wherein said elastic element controlling opening of said port has a value of elastic constant measured at -30°C differing from the value of elastic constant measured at +20°C by no more than 30% with respect to the value of elastic constant measured at +20°C.

122. (New) The valve as claimed in claim 107, wherein said elastic element is a spring.

123. (New) The valve as claimed in claim 107, wherein said elastic constant decreases on decreasing of the temperature in said temperature range.

124. (New) The valve as claimed in claim 107, wherein said elastic constant increases on decreasing of the temperature in said temperature range.

125. (New) The valve as claimed in claim 107, wherein said valve brings said tyre into communication with said tank when pressure in said tyre is lower by at least 5% than said operating pressure

126. (New) The valve as claimed in claim 122, wherein said elastic element comprises a second spring operatively associated with said spring.

127. (New) The valve as claimed in claim 126, wherein said second spring has an elastic constant substantially constant within a temperature range from -50°C to +50°C.

128. (New) The valve as claimed in claim 127, wherein said second spring supports a major portion of the load of said elastic element.

129. (New) The valve as claimed in claim 128, wherein the load supported by the second spring is about 60% to about 95% of the load, supported by said elastic element.

130. (New) The valve as claimed in claim 128, wherein the load supported by the second spring is about 70% to about 80% of the load supported by said elastic element.

131. (New) The valve as claimed in claim 126, wherein the second spring is concentrically coupled to said spring.

132. (New) The valve as claimed in claim 131, wherein the second spring is external with respect to said spring.